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Mewbourne Oil Company

Eddy County, New Mexico

Section 24/23- 18S-30E Virgo 23/24 B2AD Fed Com #1

Virgo 23/24 B2AD Fed Com #1H

30-015-44579

Original Hole

Design: Original Hole

Standard Survey Report

06 August, 2018





Microsoft Survey Report



Company: Mewbourne Oil Company
Project: Eddy County, New Mexico
Site: Section 24/23- 18S-30E Virgo 23/24 B2AD Fed Com #1
Well: Virgo 23/24 B2AD Fed Com #1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Virgo 23/24 B2AD Fed Com #1H
TVD Reference: 3632 + 27 @ 3659.0usft (Patterson 242)
MD Reference: 3632 + 27 @ 3659.0usft (Patterson 242)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Stryker_EDM

Project	Eddy County, New Mexico		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Section 24/23- 18S-30E Virgo 23/24 B2AD Fed Com #1			
Site Position:		Northing:	632,739.30 usft	Latitude: 32° 44' 19.693 N
From:	Map	Easting:	628,021.00 usft	Longitude: 103° 55' 1.142 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence: 0.23 °

Well	Virgo 23/24 B2AD Fed Com #1H			
Well Position	+N/-S	0.0 usft	Northing:	632,739.30 usft
	+E/-W	0.0 usft	Easting:	628,021.00 usft
Position Uncertainty	0.0 usft		Wellhead Elevation:	27.0 usft
			Ground Level:	3,632.0 usft

Wellbore	Original Hole					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)	
	IGRF2015	6/18/2018	7.05	60.47	48,101.29936356	

Design	Original Hole					
Audit Notes:						
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0	
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)		
	0.0	0.0	0.0		315.96	

Survey Program	Date 8/6/2018				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.0	1,807.0	Phoenix Gyro Survey (Original Hole)	NSG-CT_WL	Continuous north-seeking gyro on wireline	
1,934.0	18,930.0	MWD Survey (Original Hole)	MWD	MWD v3:standard declination	

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.52	225.17	100.0	-0.3	-0.3	0.0	0.52	0.52	0.00
200.0	0.84	242.95	200.0	-1.0	-1.3	0.2	0.38	0.32	17.78
300.0	1.09	267.10	300.0	-1.4	-2.9	1.0	0.47	0.25	24.15
400.0	1.39	276.09	400.0	-1.3	-5.1	2.6	0.36	0.30	8.99
500.0	1.72	284.75	499.9	-0.8	-7.7	4.8	0.40	0.33	8.66
600.0	1.91	290.07	599.9	0.2	-10.7	7.6	0.25	0.19	5.32
700.0	1.60	293.94	699.8	1.3	-13.6	10.4	0.33	-0.31	3.87
800.0	1.55	302.37	799.8	2.6	-16.0	13.0	0.24	-0.05	8.43

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Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
900.0	1.79	308.13	899.7	4.3	-18.4	15.9	0.29	0.24	5.76
1,000.0	2.53	312.87	999.7	6.8	-21.2	19.6	0.76	0.74	4.74
1,100.0	3.82	314.14	1,099.5	10.6	-25.2	25.1	1.29	1.29	1.27
1,200.0	4.89	312.86	1,199.2	15.8	-30.7	32.7	1.07	1.07	-1.28
1,300.0	6.14	315.05	1,298.8	22.5	-37.6	42.3	1.27	1.25	2.19
1,400.0	7.44	316.88	1,398.1	31.0	-45.8	54.2	1.32	1.30	1.83
1,500.0	8.80	320.60	1,497.1	41.6	-55.1	68.3	1.46	1.36	3.72
1,600.0	10.02	323.91	1,595.7	54.6	-65.1	84.5	1.33	1.22	3.31
1,700.0	10.77	329.61	1,694.1	69.7	-74.9	102.2	1.27	0.75	5.70
1,800.0	11.68	331.91	1,792.2	86.7	-84.4	121.0	1.01	0.91	2.30
1,807.0	11.56	337.89	1,799.0	87.9	-85.0	122.3	17.28	-1.71	85.43
1807.0' MD Phoenix Gyro Survey									
1,934.0	11.70	329.80	1,923.4	110.9	-96.3	146.6	1.29	0.11	-6.37
1,997.0	7.50	332.50	1,985.5	120.0	-101.4	156.8	6.70	-6.67	4.29
2,091.0	4.10	333.60	2,079.0	128.5	-105.7	165.9	3.62	-3.62	1.17
2,185.0	0.90	331.40	2,172.9	132.1	-107.6	169.8	3.41	-3.40	-2.34
2,280.0	1.50	143.80	2,267.9	131.8	-107.2	169.3	2.52	0.63	181.47
2,468.0	1.30	139.00	2,455.9	128.2	-104.4	164.7	0.12	-0.11	-2.55
2,657.0	2.90	135.10	2,644.7	123.2	-99.6	157.8	0.85	0.85	-2.06
2,844.0	2.80	141.50	2,831.5	116.3	-93.4	148.5	0.18	-0.05	3.42
3,032.0	2.80	143.50	3,019.3	109.0	-87.8	139.4	0.05	0.00	1.06
3,220.0	2.40	136.50	3,207.1	102.4	-82.4	130.9	0.27	-0.21	-3.72
3,408.0	2.20	132.60	3,394.9	97.1	-77.0	123.4	0.14	-0.11	-2.07
3,596.0	2.50	127.90	3,582.8	92.2	-71.1	115.7	0.19	0.16	-2.50
3,785.0	2.10	131.70	3,771.6	87.3	-65.3	108.2	0.23	-0.21	2.01
3,973.0	2.40	137.30	3,959.5	82.2	-60.0	100.8	0.20	0.16	2.98
4,161.0	2.80	128.50	4,147.3	76.4	-53.8	92.3	0.30	0.21	-4.68
4,349.0	2.90	127.60	4,335.0	70.7	-46.4	83.1	0.06	0.05	-0.48
4,537.0	2.50	121.50	4,522.8	65.6	-39.1	74.4	0.26	-0.21	-3.24
4,725.0	4.50	120.60	4,710.5	59.7	-29.3	63.3	1.06	1.06	-0.48
4,913.0	3.80	120.70	4,898.0	52.8	-17.6	50.2	0.37	-0.37	0.05
5,101.0	3.60	115.30	5,085.6	47.1	-6.9	38.6	0.21	-0.11	-2.87
5,288.0	4.20	105.10	5,272.2	42.8	5.0	27.3	0.49	0.32	-5.45
5,476.0	4.10	103.10	5,459.7	39.5	18.2	15.7	0.09	-0.05	-1.06
5,664.0	4.10	96.60	5,647.2	37.2	31.4	4.9	0.25	0.00	-3.46
5,852.0	5.10	99.60	5,834.6	35.0	46.3	-7.1	0.55	0.53	1.60
6,040.0	4.40	86.40	6,021.9	34.1	61.8	-18.5	0.69	-0.37	-7.02
6,227.0	4.50	88.40	6,208.4	34.7	76.3	-28.1	0.10	0.05	1.07
6,415.0	4.20	99.30	6,395.8	33.8	90.4	-38.6	0.47	-0.16	5.80
6,602.0	3.30	89.00	6,582.4	32.8	102.6	-47.7	0.60	-0.48	-5.51
6,791.0	4.10	103.60	6,771.0	31.3	114.6	-57.1	0.65	0.42	7.72
6,980.0	4.50	107.80	6,959.5	27.4	128.2	-69.4	0.27	0.21	2.22

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Survey

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7,168.0	3.00	106.20	7,147.1	23.8	140.0	-80.2	0.80	-0.80	-0.85
7,357.0	3.60	119.30	7,335.8	19.5	149.9	-90.1	0.51	0.32	6.93
7,546.0	2.40	104.60	7,524.5	15.6	158.9	-99.2	0.75	-0.63	-7.78
7,735.0	2.20	128.20	7,713.4	12.4	165.6	-106.2	0.51	-0.11	12.49
7,924.0	1.80	155.50	7,902.3	7.5	169.7	-112.6	0.54	-0.21	14.44
8,113.0	1.60	147.50	8,091.2	2.5	172.3	-118.0	0.16	-0.11	-4.23
8,121.9	1.66	147.83	8,100.1	2.3	172.4	-118.2	0.63	0.62	3.74
B.B. Virgo 24/23 B2AD Fed Com #1H									
8,145.0	1.80	148.60	8,123.2	1.7	172.8	-118.9	0.63	0.63	3.32
8,200.0	1.80	157.20	8,178.1	0.2	173.6	-120.5	0.49	0.00	15.64
8,231.0	4.40	220.70	8,209.1	-1.2	173.0	-121.1	12.71	8.39	204.84
8,262.0	8.20	236.30	8,239.9	-3.3	170.4	-120.8	13.33	12.26	50.32
8,294.0	12.20	244.90	8,271.4	-6.0	165.4	-119.3	13.34	12.50	26.88
8,325.0	16.30	251.00	8,301.4	-8.8	158.3	-116.4	14.07	13.23	19.68
8,357.0	20.70	255.30	8,331.8	-11.7	148.6	-111.7	14.39	13.75	13.44
8,388.0	24.80	257.90	8,360.4	-14.5	137.0	-105.6	13.61	13.23	8.39
8,419.0	28.40	260.60	8,388.1	-17.0	123.3	-98.0	12.25	11.61	8.71
8,451.0	30.90	264.20	8,415.9	-19.1	107.6	-88.5	9.59	7.81	11.25
8,482.0	33.00	267.10	8,442.2	-20.3	91.3	-78.1	8.39	6.77	9.35
8,514.0	35.30	268.90	8,468.7	-20.9	73.3	-66.0	7.85	7.19	5.63
8,545.0	38.20	270.00	8,493.5	-21.1	54.8	-53.3	9.59	9.35	3.55
8,576.0	42.70	271.00	8,517.1	-20.9	34.7	-39.2	14.67	14.52	3.23
8,608.0	46.20	271.40	8,539.9	-20.5	12.3	-23.2	10.97	10.94	1.25
8,639.0	50.00	269.80	8,560.6	-20.2	-10.8	-7.0	12.85	12.26	-5.16
8,670.0	55.00	267.40	8,579.5	-20.9	-35.4	9.6	17.26	16.13	-7.74
8,702.0	60.40	265.80	8,596.6	-22.5	-62.4	27.2	17.40	16.88	-5.00
8,733.0	65.10	265.70	8,610.8	-24.5	-89.8	44.8	15.16	15.16	-0.32
8,765.0	68.10	266.20	8,623.5	-26.6	-119.1	63.7	9.48	9.38	1.56
8,796.0	70.40	267.50	8,634.5	-28.2	-148.1	82.7	8.39	7.42	4.19
8,807.0	71.21	268.00	8,638.1	-28.6	-158.4	89.6	8.57	7.41	4.56
LP Virgo 24/23 B2AD Fed Com #1H									
<u>8,827.0</u>	<u>72.70</u>	<u>268.90</u>	<u>8,644.3</u>	<u>-29.1</u>	<u>-177.5</u>	<u>102.4</u>	<u>8.57</u>	<u>7.43</u>	<u>4.49</u>
8,859.0	75.40	270.20	8,653.1	-29.3	-208.2	123.7	9.30	8.44	4.06
8,890.0	77.80	270.40	8,660.3	-29.2	-238.4	144.7	7.77	7.74	0.65
8,922.0	80.10	270.30	8,666.4	-29.0	-269.8	166.7	7.19	7.19	-0.31
8,953.0	82.20	270.60	8,671.2	-28.7	-300.4	188.2	6.84	6.77	0.97
8,959.0	82.60	270.60	8,672.0	-28.7	-306.3	192.3	6.67	6.67	0.00
9,036.0	89.40	273.70	8,677.3	-25.8	-383.1	247.7	9.70	8.83	4.03
9,130.0	90.50	273.00	8,677.4	-20.3	-476.9	316.9	1.39	1.17	-0.74
9,224.0	89.50	270.50	8,677.4	-17.4	-570.8	384.3	2.86	-1.06	-2.66
9,319.0	89.70	271.50	8,678.1	-15.8	-665.8	451.5	1.07	0.21	1.05
9,414.0	89.50	271.70	8,678.7	-13.1	-760.8	519.4	0.30	-0.21	0.21
9,508.0	90.00	272.40	8,679.1	-9.8	-854.7	587.1	0.92	0.53	0.74

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9,602.0	88.60	268.40	8,680.3	-9.1	-948.7	652.9	4.51	-1.49	-4.26
9,696.0	88.70	269.30	8,682.5	-11.0	-1,042.6	716.9	0.96	0.11	0.96
9,791.0	88.40	270.20	8,684.9	-11.4	-1,137.6	782.6	1.00	-0.32	0.95
9,885.0	90.50	270.00	8,685.8	-11.2	-1,231.6	848.1	2.24	2.23	-0.21
9,979.0	90.90	270.40	8,684.7	-10.9	-1,325.6	913.6	0.60	0.43	0.43
10,074.0	90.70	271.00	8,683.3	-9.7	-1,420.6	980.5	0.67	-0.21	0.63
10,169.0	90.50	272.40	8,682.3	-6.9	-1,515.5	1,048.5	1.49	-0.21	1.47
10,263.0	89.20	269.70	8,682.6	-5.2	-1,609.5	1,115.1	3.19	-1.38	-2.87
10,358.0	88.80	271.10	8,684.3	-4.5	-1,704.5	1,181.6	1.53	-0.42	1.47
10,452.0	93.00	268.70	8,682.8	-4.7	-1,798.4	1,246.8	5.15	4.47	-2.55
10,547.0	93.30	269.30	8,677.6	-6.4	-1,893.3	1,311.5	0.71	0.32	0.63
10,641.0	90.50	268.60	8,674.4	-8.1	-1,987.2	1,375.6	3.07	-2.98	-0.74
10,735.0	90.60	268.60	8,673.5	-10.4	-2,081.2	1,439.2	0.11	0.11	0.00
10,829.0	90.50	270.40	8,672.6	-11.2	-2,175.2	1,504.0	1.92	-0.11	1.91
10,923.0	90.10	271.00	8,672.1	-10.1	-2,269.1	1,570.1	0.77	-0.43	0.64
11,017.0	90.00	272.20	8,672.1	-7.4	-2,363.1	1,637.3	1.28	-0.11	1.28
11,111.0	89.30	270.30	8,672.6	-5.4	-2,457.1	1,704.1	2.15	-0.74	-2.02
11,206.0	90.60	267.00	8,672.7	-7.6	-2,552.0	1,768.5	3.73	1.37	-3.47
11,301.0	90.90	267.90	8,671.5	-11.8	-2,646.9	1,831.5	1.00	0.32	0.95
11,395.0	90.90	267.90	8,670.0	-15.3	-2,740.9	1,894.3	0.00	0.00	0.00
11,489.0	91.30	268.30	8,668.2	-18.4	-2,834.8	1,957.3	0.60	0.43	0.43
11,584.0	91.60	269.10	8,665.8	-20.6	-2,929.7	2,021.8	0.90	0.32	0.84
11,679.0	91.80	269.20	8,663.0	-22.0	-3,024.7	2,086.8	0.24	0.21	0.11
11,773.0	90.50	266.70	8,661.1	-25.3	-3,118.6	2,149.6	3.00	-1.38	-2.66
11,867.0	90.50	267.40	8,660.3	-30.2	-3,212.5	2,211.4	0.74	0.00	0.74
11,962.0	90.40	267.40	8,659.5	-34.5	-3,307.4	2,274.3	0.11	-0.11	0.00
12,057.0	89.70	269.00	8,659.4	-37.5	-3,402.3	2,338.1	1.84	-0.74	1.68
12,151.0	89.50	269.30	8,660.1	-38.9	-3,496.3	2,402.5	0.38	-0.21	0.32
12,245.0	90.70	268.20	8,659.9	-40.9	-3,590.3	2,466.3	1.73	1.28	-1.17
12,339.0	91.30	267.80	8,658.3	-44.2	-3,684.2	2,529.3	0.77	0.64	-0.43
12,434.0	90.10	267.50	8,657.1	-48.1	-3,779.1	2,592.4	1.30	-1.26	-0.32
12,527.0	88.70	266.20	8,658.1	-53.2	-3,872.0	2,653.3	2.05	-1.51	-1.40
12,622.0	90.30	267.10	8,658.9	-58.7	-3,966.8	2,715.2	1.93	1.68	0.95
12,716.0	92.50	267.70	8,656.6	-63.0	-4,060.7	2,777.4	2.43	2.34	0.64
12,811.0	91.00	266.20	8,653.7	-68.1	-4,155.5	2,839.7	2.23	-1.58	-1.58
12,903.0	91.30	265.70	8,651.9	-74.5	-4,247.2	2,898.8	0.63	0.33	-0.54
12,996.0	92.30	265.40	8,649.0	-81.8	-4,339.9	2,958.0	1.12	1.08	-0.32
13,090.0	92.50	268.60	8,645.0	-86.7	-4,433.7	3,019.7	3.41	0.21	3.40
13,183.0	91.40	270.90	8,641.9	-87.1	-4,526.6	3,084.0	2.74	-1.18	2.47
13,278.0	90.40	270.20	8,640.4	-86.2	-4,621.6	3,150.7	1.28	-1.05	-0.74
13,372.0	88.90	269.90	8,640.9	-86.1	-4,715.6	3,216.1	1.63	-1.60	-0.32
13,466.0	90.90	272.60	8,641.1	-84.0	-4,809.6	3,282.9	3.57	2.13	2.87
13,561.0	90.20	272.30	8,640.2	-80.0	-4,904.5	3,351.8	0.80	-0.74	-0.32

Company: Mewbourne Oil Company
Project: Eddy County, New Mexico
Site: Section 24/23- 18S-30E Virgo 23/24 B2AD Fed Com #1
Well: Virgo 23/24 B2AD Fed Com #1H
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Virgo 23/24 B2AD Fed Com #1H
TVD Reference: 3632 + 27 @ 3659.0usft (Patterson 242)
MD Reference: 3632 + 27 @ 3659.0usft (Patterson 242)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Stryker_EDM

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,655.0	92.40	272.30	8,638.1	-76.2	-4,998.4	3,419.8	2.34	2.34	0.00
13,749.0	91.90	272.00	8,634.5	-72.7	-5,092.2	3,487.5	0.62	-0.53	-0.32
13,844.0	92.60	271.40	8,630.8	-69.9	-5,187.1	3,555.5	0.97	0.74	-0.63
13,937.0	91.10	271.90	8,627.8	-67.2	-5,280.0	3,622.0	1.70	-1.61	0.54
14,032.0	91.60	272.00	8,625.6	-64.0	-5,374.9	3,690.3	0.54	0.53	0.11
14,126.0	91.30	271.90	8,623.2	-60.8	-5,468.9	3,757.9	0.34	-0.32	-0.11
14,221.0	90.60	272.20	8,621.6	-57.4	-5,563.8	3,826.3	0.80	-0.74	0.32
14,315.0	89.00	270.30	8,621.9	-55.3	-5,657.8	3,893.1	2.64	-1.70	-2.02
14,410.0	88.30	270.50	8,624.2	-54.6	-5,752.7	3,959.6	0.77	-0.74	0.21
14,504.0	91.00	272.00	8,624.8	-52.6	-5,846.7	4,026.4	3.29	2.87	1.60
14,599.0	88.90	272.50	8,624.8	-48.9	-5,941.6	4,095.1	2.27	-2.21	0.53
14,693.0	89.10	271.90	8,626.5	-45.3	-6,035.5	4,163.0	0.67	0.21	-0.64
14,787.0	92.70	272.30	8,625.0	-41.8	-6,129.4	4,230.7	3.85	3.83	0.43
14,882.0	93.80	274.10	8,619.6	-36.5	-6,224.1	4,300.4	2.22	1.16	1.89
14,976.0	91.00	274.10	8,615.7	-29.8	-6,317.8	4,370.3	2.98	-2.98	0.00
15,071.0	89.80	272.00	8,615.0	-24.8	-6,412.7	4,439.9	2.55	-1.26	-2.21
15,165.0	90.50	269.10	8,614.8	-23.9	-6,506.6	4,505.8	3.17	0.74	-3.09
15,260.0	90.30	270.40	8,614.1	-24.3	-6,601.6	4,571.6	1.38	-0.21	1.37
15,354.0	90.60	272.10	8,613.4	-22.2	-6,695.6	4,638.4	1.84	0.32	1.81
15,448.0	91.70	271.50	8,611.5	-19.3	-6,789.5	4,705.8	1.33	1.17	-0.64
15,543.0	91.60	270.80	8,608.7	-17.4	-6,884.5	4,773.2	0.74	-0.11	-0.74
15,637.0	91.70	267.40	8,606.0	-18.8	-6,978.4	4,837.4	3.62	0.11	-3.62
15,731.0	92.20	267.40	8,602.8	-23.1	-7,072.3	4,899.6	0.53	0.53	0.00
15,826.0	89.60	268.60	8,601.3	-26.4	-7,167.2	4,963.2	3.01	-2.74	1.26
15,920.0	89.70	270.00	8,601.9	-27.6	-7,261.2	5,027.7	1.49	0.11	1.49
16,015.0	90.80	270.80	8,601.5	-26.9	-7,356.2	5,094.2	1.43	1.16	0.84
16,109.0	90.10	268.50	8,600.8	-27.5	-7,450.2	5,159.1	2.56	-0.74	-2.45
16,203.0	88.30	269.90	8,602.1	-28.8	-7,544.1	5,223.5	2.43	-1.91	1.49
16,298.0	89.30	268.00	8,604.1	-30.5	-7,639.1	5,288.3	2.26	1.05	-2.00
16,392.0	91.30	269.10	8,603.6	-32.9	-7,733.0	5,351.9	2.43	2.13	1.17
16,486.0	92.00	269.90	8,600.9	-33.7	-7,827.0	5,416.6	1.13	0.74	0.85
16,581.0	90.70	271.00	8,598.6	-33.0	-7,922.0	5,483.1	1.79	-1.37	1.16
16,675.0	91.40	271.20	8,596.9	-31.2	-8,015.9	5,549.8	0.77	0.74	0.21
16,770.0	89.50	270.80	8,596.2	-29.5	-8,110.9	5,617.0	2.04	-2.00	-0.42
16,864.0	91.60	270.00	8,595.3	-28.9	-8,204.9	5,682.8	2.39	2.23	-0.85
16,972.0	90.50	270.30	8,593.3	-28.6	-8,312.9	5,758.0	1.06	-1.02	0.28
17,067.0	91.60	268.30	8,591.5	-29.7	-8,407.9	5,823.2	2.40	1.16	-2.11
17,159.0	90.90	267.70	8,589.5	-32.9	-8,499.8	5,884.8	1.00	-0.76	-0.65
17,251.0	90.50	267.90	8,588.4	-36.5	-8,591.7	5,946.2	0.49	-0.43	0.22
17,343.0	89.40	268.30	8,588.5	-39.5	-8,683.6	6,007.9	1.27	-1.20	0.43
17,436.0	91.90	268.20	8,587.4	-42.4	-8,776.6	6,070.5	2.69	2.69	-0.11
17,529.0	92.60	267.20	8,583.8	-46.1	-8,869.4	6,132.3	1.31	0.75	-1.08

Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Virgo 23/24 B2AD Fed Com #1H
Project:	Eddy County, New Mexico	TVD Reference:	3632 + 27 @ 3659.0usft (Patterson 242)
Site:	Section 24/23- 18S-30E Virgo 23/24 B2AD Fed Com #1	MD Reference:	3632 + 27 @ 3659.0usft (Patterson 242)
Well:	Virgo 23/24 B2AD Fed Com #1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Stryker_EDM

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
17,621.0	91.90	267.00	8,580.2	-50.7	-8,961.3	6,192.8	0.79	-0.76	-0.22
17,714.0	91.20	266.00	8,577.7	-56.4	-9,054.0	6,253.2	1.31	-0.75	-1.08
17,807.0	89.90	265.90	8,576.8	-63.0	-9,146.8	6,313.0	1.40	-1.40	-0.11
17,899.0	88.40	265.70	8,578.1	-69.7	-9,238.5	6,371.9	1.64	-1.63	-0.22
17,992.0	88.20	266.00	8,580.9	-76.5	-9,331.3	6,431.5	0.39	-0.22	0.32
18,085.0	89.20	268.90	8,583.0	-80.6	-9,424.1	6,493.1	3.30	1.08	3.12
18,178.0	89.90	269.50	8,583.7	-81.9	-9,517.1	6,556.8	0.99	0.75	0.65
18,270.0	90.20	270.00	8,583.6	-82.3	-9,609.1	6,620.5	0.63	0.33	0.54
18,363.0	91.00	270.60	8,582.7	-81.8	-9,702.1	6,685.5	1.08	0.86	0.65
18,458.0	92.50	270.70	8,579.8	-80.7	-9,797.1	6,752.3	1.58	1.58	0.11
18,552.0	94.00	270.70	8,574.4	-79.6	-9,890.9	6,818.3	1.60	1.60	0.00
18,646.0	90.90	271.90	8,570.4	-77.4	-9,984.8	6,885.1	3.54	-3.30	1.28
18,701.6	87.95	271.78	8,571.0	-75.7	-10,040.3	6,925.0	5.32	-5.32	-0.21
PBHL Virgo 24/23 B2AD Fed Com #1H									
18,740.0	85.90	271.70	8,573.0	-74.5	-10,078.7	6,952.5	5.32	-5.32	-0.21
18,833.0	89.50	272.10	8,576.8	-71.4	-10,171.5	7,019.2	3.89	3.87	0.43
18,867.0	88.50	271.50	8,577.4	-70.3	-10,205.5	7,043.6	3.43	-2.94	-1.76
18,930.0	88.50	271.50	8,579.0	-68.7	-10,268.5	7,088.6	0.00	0.00	0.00
18930.0' MD Projected to Bit - New Virgo 24/23 B2AD Fed Com #1H									

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,807.0	1,799.0	87.9	-85.0	1807.0' MD Phoenix Gyro Survey
18,930.0	8,579.0	-68.7	-10,268.5	18930.0' MD Projected to Bit



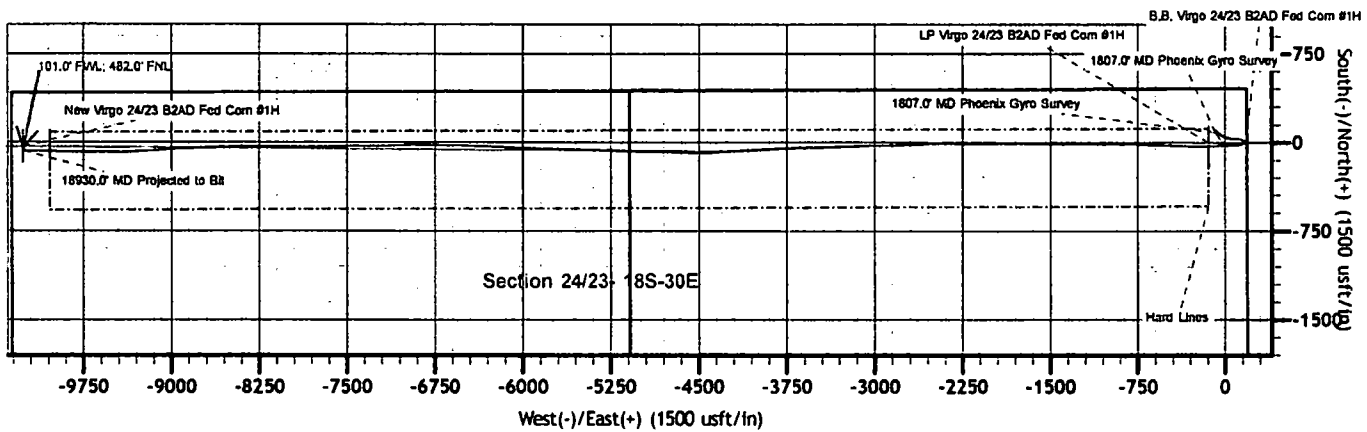
COMPANY: Mawbourne Oil Company
 WELL: Virgo 23/24 B2AD Fed Com #1H
 COUNTY: Eddy County, New Mexico
 DATUM: NAD 1927 (NADCON CONUS)
 RIG: Patterson Patterson 242



GRID CORRECTION: To convert a Magnetic Direction to a Grid Direction, Add 6.82°

OFFICE: 936.582.7296

GEODETIC ZONE: New Mexico East 3001										
3632 + 27 @ 3859.0usft (Patterson 242)										
GROUND ELEVATION: 3632.0										
+N-S	+E-W	Northing	Easting	Latitude	Longitude	Slot				
0.0	0.0	632739.30	628021.00	32° 44' 19.693 N	103° 55' 1.142 W					
PLAN SECTIONS										
Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	VSect	Target
1	12822.0	90.30	267.10	8858.9	-58.7	-3968.8	0.00	0.00	3967.0	
2	13287.7	90.91	270.42	8851.8	-73.3	-4642.2	0.50	79.57	4842.4	
3	18695.4	90.91	270.42	8568.0	-33.5	-10039.1	0.00	0.00	10039.2	PBHL Virgo 24/23 B2AD Fed Com #1H
4	18925.4	90.91	270.42	8562.3	-31.8	-10269.1	0.00	0.00	10269.1	New Virgo 24/23 B2AD Fed Com #1H



SHL 450' FNL; 185' FEL
 Section 24-18S-30E
 PBHL 450' FNL; 330' FWL
 Section 23-18S-30E

